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TRW

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(E73-10717) ERTS IMAGE DATA COMPRESSION TECHNIQUE EVALUATION Monthly Progress Report, period ending 1 May 1973 (TRW Systems Group) 2 p HC $3.00 CSCL 05B
Unclas
G3/13 00717

Mr. Edward W. Crump
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Goddard Space Flight Center
Greenbelt, Maryland 20771

Attention: Mr. Edward W. Crump, Code 430

Subject: Monthly Progress Report for Period Ending 1 May 1973.

Contract: ERTS Image Data Compression Technique Evaluation
MMC #153

Principal Investigator: Dr. Donald J. Spencer, GSFC ID PR512

During April, more subscenes containing object classes were compressed using the TRW algorithms and the results of these runs are tabulated at the end of the report based on the SSDIA-Rice strictly information preserving algorithm. The study is proceeding on schedule and no problems have occurred which would prevent our meeting the proposed schedule. The facilities for making the final reconstructed imagery is scheduled to be operational around 1 June 1973.

A tape of the raw MSS data, as received at Goddard, has been ordered to permit a more accurate determination of the degree of compression that could be expected if the compression were performed on-board the ERTS satellite. Although runs of the algorithm on spacecraft data were not specified in the proposal or the contract, we feel that such an output is desirable and, if no problems occur in receiving or reformatting this tape, the results obtained will form a part of the final report.

COMPRESSION RESULTS TO DATE (USING SSDIA/RICE ALGORITHM)

1. 1017-16093 (Southern Wisconsin)
   a. Agriculture - 3.4 bits/pixel
   b. Lake - 1.3 bits/pixel
2. 1018-18010 (Southern California)
   a. City (Los Angeles) - 3.0 bits/pixel
   b. Desert - 2.6 bits/pixel
   c. Harbor - 2.5 bits/pixel
   d. Ocean - 1.4 bits/pixel
3. 1167-15011 (Maine)
   a. Coastline - 2.4 bits/pixel
4. 1071-17551 (San Bernardino, Calif.)
   a. City - 3.1 bits/pixel
   b. Haze over mountains - 2.9 bits/pixel
   c. Haze over agriculture - 3.2 bits/pixel
5. 1015-17440 (Imperial Valley, Calif.)
   a. Agriculture - 3.5 bits/pixel
   b. Mountains - 3.0 bits/pixel
   c. Desert - 2.5 bits/pixel

Donald J. Spencer